

ABSTRACT OF THE DISCLOSURE

Stereolithographically fabricated conductive elements and semiconductor device components and assemblies including these conductive elements. The conductive elements may have multiple superimposed, contiguous, mutually adhered layers of a conductive material, such as a thermoplastic conductive elastomer or a metal. In semiconductor device assemblies, the stereolithographically fabricated conductive elements may be used to electrically connect semiconductor device components to one another. The conductive elements may also be used as the conductive traces and vias on circuit boards. Similarly, the stereolithographically fabricated conductive elements can be used in to reroute the bond pad locations of a semiconductor die, such as in chip-scale packages. A stereolithographic method for fabricating the conductive elements may include use of a machine vision system with at least one camera operably associated with a computer controlling a stereolithographic application of material so that the system may recognize the position, orientation, and features of a semiconductor device assembly, semiconductor die, or other substrate on which the conductive element is to be fabricated.

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